

## **SPECIFICATION**

### **Title of Invention**

Speargun Open Muzzle Band Elevators

### **Background of the Invention**

This patent application is for an open muzzle band elevator, which attaches to the distal end of a speargun and is designed to aid the spearfisherman fire his speargun more accurately, with less noise, and greater efficiency.

### **Brief Summary of the Invention**

Spearguns are commonly powered by tubular rubber bands, called power bands. When these power bands are attached to a speargun they are often placed below the resting spear shaft at the end of the gun barrel. This style of spearguns with the bands below the spear shaft are called "Open Muzzle" style for their simplicity and lack of obstructions (such as power bands) above the spear shaft. When the power bands are placed below the spear shaft much of power and accuracy is lost, and the power release is directed at a downward vector to the origin of the powerband. This invention, Speargun Open Muzzle Band Elevator, raises the stretched power bands to the same plane as the spear shaft thus alleviating the downward vector that other "open muzzle" styles have.

### **Brief Description of the Drawing**

**Figure #1** – This figure shows a side view of the Speargun Open Muzzle Band Elevator.

**Figure #2** – This figure shows a top view of the Speargun Open Muzzle Band Elevator.

**Figure #3** – This figure shows a vertical view of the Speargun Open Muzzle Band Elevator and how it would fit into the distal end of a speargun barrel. Notice how the stabilizer bar is horizontal and is integrated into the muzzle piece. The cocked powerbands would lie over the stabilizer bar and are held parallel to the spear.

### **Detailed Description of the Invention**

The Speargun Open Muzzle Band Elevator is designed to raise the powerbands commonly used on open muzzle spearguns to the same plane as the spear shaft. This is accomplished by the inclusion of a bar into the muzzle design, which elevates the stretched power bands to the correct height. The muzzle is a speargun part, which affixes to the distal end of the speargun and holds the power bands. Often times these bands are held below the plane of the spear shaft causing the bands to release their power in a downward vector towards the muzzle/powerband origin often resulting in speargun recoil. Speargun recoil if not controlled by the spearfisherman will cause the speargun to “jerk” and dramatically reduces the accuracy of the shot. This elevator bar allows the power bands, which are stretched over the bar to release their energy in the same plane as the spear shaft. By releasing their energy into the same plane as the spearshaft the powerbands do not recoil and thus the spear is fired with greater accuracy.

This elevator bar is unique, it is molded directly into the muzzle. Currently available open muzzles sold today are all made of derlin plastic and machined on lathes. My design with elevator bars is manufactured with polyurethane resin casting techniques and thus I have overcome the complexity of integrating an elevator bar into the muzzle, as one piece, by molding the muzzle in one step. The current formulation uses two part resins from BJB Plastics with glass frit added for additional strength and stability.